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Carbon black and compound performance of IRPs
Compounding, vulcanization latitudes of SBB
Effect of silica structure on resilience

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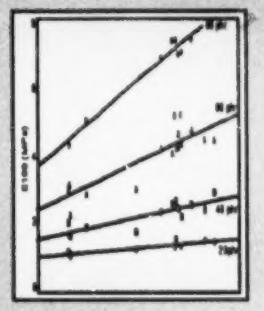

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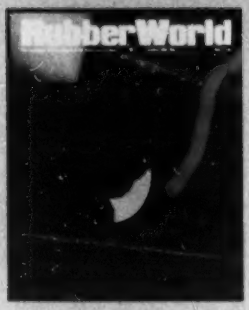

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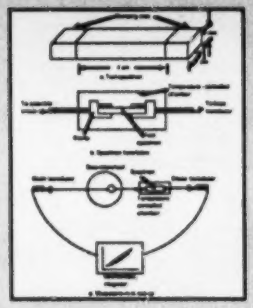

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Editorial

It is somewhat disappointing that there was no mention of recycling rubber back into products by the Rubber Manufacturers Association when they announced the formation of a council on scrap tire disposal. It appears that the thrust of the council will be to push incineration as the answer to the mounting scrap tire problem. Even though the RMA announced that the council would develop a comprehensive program to find sound economic and environmentally acceptable solutions to scrap tire disposal there is no mention of reuse within the industry. The RMA says the council, under its initial framework, would be staffed with technical and marketing professionals who would organize a program of industry supported activity to: encourage the use of scrap tires as a fuel source; assist waste haulers in identifying sources of waste tires and encourage development of scrap tire collection; advise state and local officials on their own scrap tire plans and to publicize scrap tire disposal success stories. These activities are a good step forward for an industry that historically has taken the stance that scrap tires weren't its concern.

But now, when it appears that legislation is forthcoming from federal, state and municipal governments concerning this issue, the thrust of the RMA is to encourage others to take the problem off their hands. Reducing the scrap tire problem through burning should not be the only solution offered by such a technically advanced industry.

Burning is a solution to the scrap tire problem. It's the cheapest and takes the least industry involvement. It also might be a quick remedy to the growing problem of landfill space. But this isn't what recycling is about. The RMA estimates that between 200 and 250 million scrap tires are generated in the U.S. so it is an ongoing problem. Is burning environmentally safe now? Will it be next year? How about five years from now?

The majority of materials that make up a tire come from non-renewable resources and the industry should be exploring ways of incorporating recycled material back into the product. It's amazing to me that an industry that has accepted numerous challenges throughout its history and has been successful on most fronts would seem to dodge the challenge of using its own material back into its product. I hope the RMA and the industry seriously looks at the recycling issue and attempts to actually recycle its product as a responsible industry must .

Don R. Smith
Editor

RubberWorld

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Business Briefs

Acquisitions, expansions

Lexington Precision merged its two rubber fabricating units, **Stalwart Rubber** and **Elastomeric Products**, and formed **Lexington Components** (LCI), as a wholly owned subsidiary. An LCI sales and technical service office will be opened in Detroit, MI and a 52,000 sq. ft. manufacturing facility in Warren, OH, will open in June. LCI will invest more than $3.7 million in this facility in 1990. The company will also consolidate the manufacture of silicone and organic rubber insulators at its Jasper, GA plant. More than $1 million will be spent to expand and modernize the plant. Construction will soon begin on a 3,200 square foot testing laboratory and quality control center. As a result of the consolidation at Jasper, production of LCI's Burton, OH plant has been cut back and will close by June 1.

BASF will spend $17 million to build a plant to produce Elastollan polyurethane elastomer resins at Wyandotte, MI. BASF will furnish the key raw materials necessary for production from its own facilities. The Wyandotte plant will make both polyester- and polyether-based polyurethane elastomer resins for injection molding, blow molding and extrusion.

Mexico's **Novum Group** acquired a majority equity position in **Hules Mexicanos, S.A.** (Humex), increasing Novum's production capacity in carbon black by 247%, from 65,000 to 161,000 metric tons per year, and various synthetic rubbers by 197%, from 80,000 to 155,000 metric tons annually.

Minnesota Rubber opened operations of a 30,000 square foot manufacturing plant in Singapore. The company will spend $5 million over five years to develop the factory in Tuas into a world class manufacturing facility, specializing in custom molded rubber components. Currently the plant employs 30. Some of the workers are being trained at Minnesota Rubber's Minneapolis, MN plant.

1989 RMA rubber report
(figures in metric tons)

	1989	1988	% chg.
Total new rubber			
New rubber available	3,534,917	3,436,940	3.1
Imports	1,234,097	1,107,617	12.0
Exports	498,116	570,214	-12.6
Apparent consumption	3,005,611	2,875,129	4.8
Total natural rubber			
Imports	909,415	853,862	6.5
Exports	30,468	54,924	-44.5
Apparent consumption	889,514	858,277	3.6
Total synthetic rubber			
Production	2,301,820	2,334,722	-1.1
Imports	324,682	247,755	31.0
Exports	467,648	515,290	-9.2
Apparent consumption	2,116,106	2,016,849	5.3
Total SBR			
Production	873,760	909,487	-3.2
Imports	109,006	91,456	19.2
Exports	175,723	189,097	-7.1
Apparent consumption	793,081	778,058	2.8
Total nitrile			
Production	69,236	76,294	-9.2
Imports	15,776	16,579	-4.8
Exports	18,237	15,065	21.1
Apparent consumption	65,845	53,676	-10.9
Polybutadiene			
Production	411,486	407,178	1.1
Imports	65,457	75,239	-13.0
Exports	82,267	66,993	22.8
Apparent consumption	374,793	406,060	-7.8
Ethylene-propylene			
Production	259,576	263,089	-1.3
Imports	32,367	15,307	111.4
Exports	55,875	47,908	16.6
Apparent consumption	228,656	229,820	-.4
Butyl, polychloroprene, polyisoprene, silicone and other synthetic elastomers			
Production	687,762	678,674	1.3
Imports	102,076	49,174	107.6
Exports	136,546	198,227	-30.9
Apparent consumption	653,729	529,232	23.5

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Circle 4 on card

Business Briefs

Silicones for use in their process.

Dayco Products acquired 100% ownership of its timing belt plant, a joint venture with **Uniroyal Manuli Rubber S.R.L.** The new company, **Dayco Italy, S.p.A.** will expand the plant to produce other rubber products in addition to timing belts.

Saudi Basic Industries signed a construction contract to expand ethylene production at its wholly-owned affiliate **Arabian Petrochemical** in Al-Jubail Industrial City. The contract covers engineering, detailed design, construction and purchasing. The contract will be 33 months, and the plant is expected to go on-stream in 1993. Capacity of the plant will be 500,000 metric tons per year of ethylene, and other products will include 300,000 mt/y of propylene, 100,000 mt/y of butadiene and 70,000 mt/y of benzene.

Georgia-Pacific Resins purchased five resin formulations from **Union Carbide** for use as hardeners in epoxy crosslinking systems.

MDA Scientific of Lincolnshire, IL acquired the assets of the former **Tecan Remote**, which developed remote sensing products, located in Norcross, GA. MDA Scientific manufactures a wide range of instruments employed for detecting toxic and trace gases.

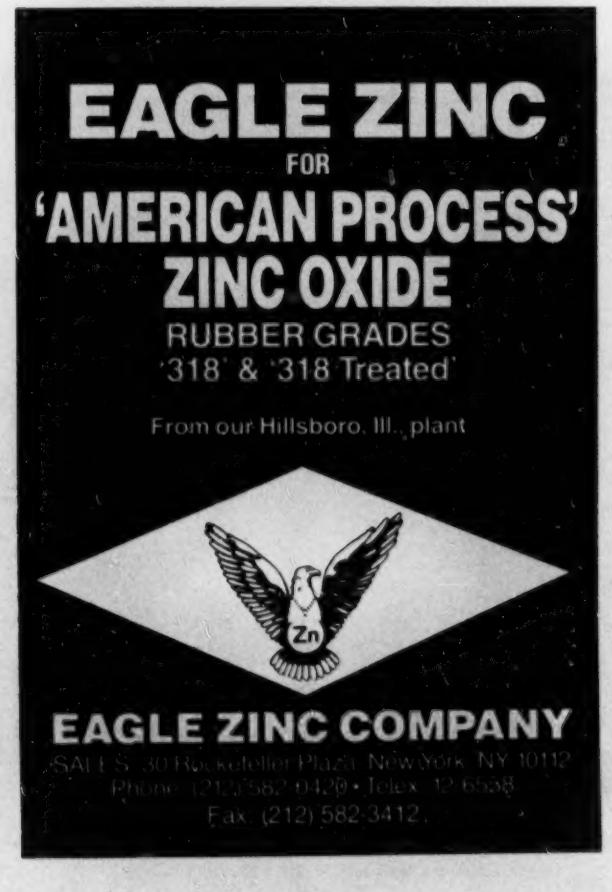
U.S.-based **Sartomer** and French-based **Craynor** will join **Total**, a $15 billion dollar French oil and chemical company. The companies will share resources and cooperate on all activities relating to the marketing, research and development, manufacturing and distribution of oligomers and monomers on a global basis. Craynor will market Sartomer's product line in Europe.

Sartomer moved its corporate headquarters from West Chester, PA to an expanded facility in Exton, PA, that will house its corporate and administrative offices.

Dexter made an agreement in principle to acquire all of the issued and outstanding shares of **Crown Metro Aerospace Coatings**, a majority-held subsidiary of **Crown Metro**, of Greenville, SC. The purchase price was not disclosed. The CMAC business will be operated by its present management as part of the Dexter Specialty Coatings Division, headquartered in Waukegan, IL.

Swedish based **SKF**, a manufacturer of rolling bearings, has drawn up a definitive agreement under which it will acquire from **Ifint S.A.**, a Luxembourg holding company, all the stock of Ifint's wholly-owned subsidiary, **CR Industries**. CR Industries (Chicago Rawhide Manufacturing), a producer of fluid sealing devices, has 10 manufacturing plants in the United States, two in Canada and joint ventures in Japan and Mexico.

Amoco Chemical will construct a world-scale polypropylene unit at its Chocolate Bayou, LA plant. Based on Amoco's proprietary gas-phase process and high-yield catalyst, the unit will add 300 million pounds per year of capac-



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RMA tire report - January
(figures in thousands of units)

Passenger tires	YTD '90	YTD '89	% change
Shipments			
original equipment	2,878	4,740	-39.3
radial	2,503	4,125	-39.3
replacement	11,992	11,740	2.1
radial	11,552	11,043	4.6
export	1,071	1,086	-1.4
radial	1,024	986	3.9
total	15,941	17,566	-9.3
radial	15,078	16,154	-6.7
Production	15,516	15,514	--
radial	14,937	14,368	4.0
Truck & bus tires			
Shipments			
original equipment	548	745	-26.5
radial	471	614	-23.3
replacement	2,986	2,836	5.3
radial	1,811	1,648	9.9
export	289	319	-9.5
radial	222	242	-8.4
total	3,822	3,900	-2.0
radial	2,504	2,504	--
Production	3,371	3,430	-1.7
radial	2,351	2,238	5.0